

REMARKS

In accordance with the foregoing, the specification has been amended to improve form and provide improved correlation with the drawings and claims. Claims 1, 10 and 21 have been amended. No new matter is presented in this Amendment.

REJECTIONS UNDER 35 U.S.C. §102:

At page 2 of the Office Action, Claims 10-11 and 21-22 were rejected under 35 U.S.C. §102(b) as being anticipated by Kashihara et al. (U.S. Patent 5,793,741). Regarding claim 10, the Examiner alleged that Kashihara discloses an optical information storage medium including a first area, a second area and two track pitches, comprising a first area in which first data is recorded in corresponding first tracks, adjacent pairs of the first tracks having a first track pitch; and a second area in which second data is recorded in corresponding second tracks, adjacent pairs of the second tracks having a second track pitch other than the first track pitch. Regarding claim 11, the Examiner alleged that the Applicants [allegedly] Admitted Prior Art (hereafter AAPA) provides that the first area is within a lead-in area of the optical information storage medium. For the following reasons, this rejection is respectfully traversed and reconsideration is requested.

Independent claims 10 and 21 are amended to provide that the pits are formed in the tracks of the first area and second area. In Kashihara, on the other hand, a track having one track pitch is a control information signal pit portion, and a track having another track pitch is a continuous groove data recording region. Kashihara does not teach or suggest any optical information storage medium having different track pitches for different regions having pits. Therefore, this rejection is thereby overcome.

REJECTIONS UNDER 35 U.S.C. §103:

At page 3 of the Office Action, claims 1 - 9, 12-20, and 23-31 were rejected under 35 U.S.C. §103(a) as being unpatentable over AAPA, which is Applicants [allegedly] Admitted Prior Art in view of Kashihara as applied to claims 10-11 and 21-22 above. Regarding independent claim 1, the Examiner alleged that AAPA discloses a storage medium including a lead-in area; a lead-out area; and a user data area formed between the lead-in and lead-out areas and in which user data is recorded, wherein pits are formed in tracks in the lead-in area, the user data area, and the lead-out area. The Examiner acknowledged that AAPA does not disclose two types of track pitch in different areas. The Examiner alleged that Kashihara discloses a first track pitch

between adjacent tracks in all or a portion of the area is different from a second track pitch between adjacent tracks in remaining areas of the optical information storage medium. The Examiner took the position that it would have been obvious to use a dual track pitch in the system of AAPA to reduce noise, increase differential signal amplitude, increase S/N ratio and increase reliability of reading the control information in the system of AAPA and provide better signal controls and improve the quality of signals. For the following reasons, this rejection is respectfully traversed and reconsideration is requested.

Amended independent claim 1 is directed to a storage medium including a lead-in area; a lead-out area; and a user data area formed between the lead-in and lead-out areas and in which user data is recorded, wherein pits are formed in tracks in the lead-in area, the user data area, and the lead-out area and wherein a first track pitch between adjacent tracks in a portion of the lead-in area is different from a second track pitch between adjacent tracks in remaining areas of the optical information storage medium.

As noted above, the Examiner acknowledged that the alleged "Applicant's Admission of Prior Art" does not describe two types of track pitch in different areas of the optical information storage medium. Moreover, Kashiara is not directly relevant to an information storage medium according to independent claim 1. Kashiara relates to an optical disk having a structure wherein a control information signal pit portion 3 is followed by a continuous groove data recording region 2. As explained, for example, in col. 1, lines 43 – 55 and col.2, lines 26 – 46, the track pitch is varied between the pit portion 3 and the continuous groove portion 2 so that the portion of the disk having pits and the portion of the disk having a continuous groove will have the same tracking signal amplitude. The advantages alleged by the Examiner of reducing noise, increasing differential signal amplitude, increasing S/N ratio and increasing reliability of reading the control information are all related in Kashiara to equalizing the tracking modulation degree and tracking signal amplitude between the pitted portion 3 and continuous portion 2. Kashiara does not provide any teaching, suggestion to provide an optical information storage medium in which a first track pitch between adjacent tracks in a portion of a lead-in area is different from a second track pitch between adjacent tracks in remaining areas in an optical information storage medium in which pits are formed in tracks in the lead-in area, the user data area, and the lead-out area. In particular, Kashiara does not provide any motivation that would be relevant to an optical information storage medium in which pits are formed in tracks in the lead-in area, the user data area, and the lead-out area.

Regarding claims 4, 5, 7 and 8, the Examiner alleged that Kashiara teaches two track pitches as 1.6 and 1.2 with a ratio of 1.33. The Examiner acknowledged that Kashiara does not

teach a ratio of pitch to be 1.5 or higher, but alleges that such a pitch would be obvious to reduce noise adjusted to the system parameters and different wavelengths of the laser. It is respectfully submitted that the Examiner did address the substance of claims 4 and 5. In particular, claims 4 and 7 provide that a ratio of tracking error signals detected in the at least one of the first and second subareas having the first track pitch to tracking error signals detected in areas having the second track pitch is 1.5 or more. Claims 5 and 8 provide that a ratio of differential phase tracking error signals detected in the at least one of the first and second subareas having the first track pitch to differential phase tracking error signals detected in the areas having the second track pitch is 1.5 or more. These features are not taught or suggested by Kashihara.

Based on the foregoing, this rejection is respectfully requested to be withdrawn.

CONCLUSION:

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

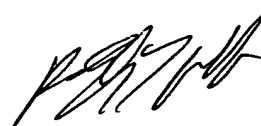
Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 503333.

Respectfully submitted,

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Date: Aug. 7, 2008

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